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ABSTRACT

A study investigated the effects of the motivational variables of attribution and self-efficacy on the continued use of successfully learned strategies which promote independent learning from text. The subjects consisted of 11 freshmen and sophomore students participating in a two-week workshop on learning strategies which included a study project and instruction in prereading, during-reading, and postreading strategies to enhance independent learning and retention of written material. Subjects also responded to pre- and post-workshop strategy and progress questionnaires to determine their awareness and use of reading-to-learn strategies as well as the value they placed on such strategies. Results revealed that four of the students were using more study strategies than they had been before the workshop, four were using the same number or fewer, and three resisted all efforts at communicating information. Responses also revealed that all students attributed any success to either ability or effort and any failure to task characteristics or lack of effort. Findings suggest that students who do not actually improve their grades demonstrate increased strategy use in a continuing effort to do so, while those students who do increase their grades attribute their success to their efforts, not to increased strategy use. (Thirteen references and three appendixes containing the strategy and progress questionnaires and student information are attached.) (KEH)

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What Does It Take For College Students To "Buy In" To Study Strategy Use?

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What Does It Take For College Students To "Buy In" To Study Strategy Use?

Instructional studies of the effects of learning strategy training abound in the professional literature (e.g., Cook & Mayer, 1985; Elliott & Fairbanks, 1986; Fitzgerald, 1986; King, Biggs, & Lipsky, 1984; Simpson, 1986). And metacognition has increasingly been mentioned as a requisite ability in independent studying and learning from text in the sense that a learner must have knowledge and control of the self, task, and strategy variables which interact for successful performance (Flavell, 1979; Paris, Lipson, & Wixson, 1983). It is generally agreed upon that the very use of a learning/study strategy implies learner-initiated and intentional behavior (Underwood, 1978); hence, motivation must certainly impact this decision to use strategies (Palmer & Goetz, 1988).

While it has been demonstrated that learners can benefit from strategy training which includes metacognitive instruction, the failure of these learners to use or generalize the strategies remains a concern and deserves consideration (see Brown et al., 1983). Therefore, it was the purpose of this study to replicate and extend the work of Schmitt (1988) to investigate the effects of the motivational variables of attribution (Weiner, 1976) and self-efficacy (Bandura, 1982) on the continued use of successfully learned strategies which promote independent learning from text. Specifically, this study seeks to answer the question "How do students' success and failure attributions

and their opinions about the value of the contributions of their abilities and efforts affect whether or not they will increase their strategy use after training?"

Method

Subjects

The sample consisted of 11 students, 6 males and 5 females, from a small private liberal arts university with high admission standards. There were 9 freshman and 2 sophomores in the group. The mean combined score on the Scholastic Aptitude Test (SAT) was 1070 for these students. The group was participating in a two-week workshop on learning strategies being conducted by the experimenter. The students had chosen to be involved in the workshop, which was one of 100 courses covering various topics being offered during a four-week winter term at the university. The majority of the students had opted to take the course because their grade point averages had declined measurably during their first year in college. Specifically, the mean combined high school GPA for these students was 3.44 while the mean combined college GPA was 2.43, representing a 29% decrease overall for the group.

Procedure

During the first session, the subjects completed a Strategy Questionnaire designed by the experimenter to determine their awareness and use of reading-to-learn strategies, as well as information about how they valued such strategies (see Table 1). They also responded to

open-ended questions about their motivation for participating in the workshop.

In addition, they completed a reading-to-learn activity, also designed by the experimenter, which functioned as a self-report of strategy awareness and use. This activity, which involved reading a social studies selection, was comprised of three parts, each designed to elicit different information about the processes they engage in to learn. In each part, the subjects were instructed to read for different purposes (e.g., an objective or an essay test). One section was designed to measure "in process" strategy use, comprehension monitoring, and thoughts about the content. The purpose of the other two sections was to determine task-relevant study strategies through the use of postreading self-reports of strategy use. Then an objective test and an essay test were administered for the appropriate sections to provide information about the success of the study strategies for comprehension and retention of main points and details. The information made available from these activities was used for reflection and self-evaluation of strategy use. Group discussions centered on the effectiveness of strategy use and when new strategies were taught they were compared and contrasted to the types of tasks required in this activity.

The workshop sessions, which totalled 25 hours, included instruction in prereading, during reading, and postreading strategies which would enhance independent learning and promote retention of written material. Specifically, for prereading, subjects were taught

how to preview the material to activate background knowledge, to generate prequestions, to formulate predictions/hypotheses about the content, and to set purposes and make plans/strategies for reading. For during reading strategies, subjects were taught how to read to verify or reject hypotheses and formulate new ones, to answer prequestions, and to summarize subsections of the materials and annotate text as monitoring strategies. As postreading strategies, the subjects were taught how to check on their purposes and to generate a structured representation of the relationships among ideas using a semantic web outline format. A college level introduction to psychology text was used as the written material and students completed practice tasks outside of class.

During the concluding session, subjects completed activities similar to the pre-experimental activities described above which provided information about their new insights and skills in the areas described. They also completed, outside of class, a study project which required them to utilize the strategies learned in the workshop. Follow-up measures, administered during mid-term, included a modified Strategy Questionnaire which deleted the section on awareness of strategies, designed to determine the extent to which the learned strategies were being employed and a Progress Report (See Table 2), designed to access information concerning the affects of the motivational variables of attribution and self-efficacy on strategy use. Information on final semester grades was obtained, as well, because success or lack of success in raising GPAs may figure in to the cost-effort factor involved in choosing to use strategies.

Results and Discussion

It was determined by inspection of post-session measures and the study project, that all students had successfully learned the study strategies and this information was given to students via a progress report. Information was collected at midterm concerning students' progress. Table 3 lists information collected at midterm concerning current strategy use and student responses to attribution statements about success and failure and to self-efficacy statements about ability and effort. Also listed are the students' GPAs from the semesters before and after the workshop.

Responses on midterm Strategy Questionnaires revealed that four of the students were using more study strategies than they had been before the workshop and that four of the students were using the same number or fewer. Three students resisted all efforts at communication, and therefore, no information concerning their progress or use of strategies is known. Information on semester GPAs indicated that six of the students earned lower grades (including the three who did not respond to questionnaires), four earned higher grades, and one remained at relatively the same level.

Responses from Progress Reports revealed that all students attributed any success they were having to either ability or effort and any failure to task characteristics or lack of effort. Responses to questions about how they perceived their efforts and abilities with respect to their success or failure revealed a moderate to high sense of

value placed on these characteristics (i.e., they had high expectations that their efforts would be rewarded and that they had the ability to perform the strategies appropriately.)

It is not surprising that these particular students perceived their abilities and efforts as valuable assets. The fact that they enrolled in the workshop indicated they had a healthy respect for themselves as students and wanted to correct their current grade difficulties. Students with low self-efficacy might have felt that no amount of effort on their part could solve their problems and that they were not capable of learning strategies for success.

An interesting pattern emerges, however, when strategy use is considered. The four students who reported using more strategies than they had been prior to the workshop all were earning lower or, in one case, equivalent grades compared to the previous semester. The students who reported using the same number or fewer strategies all were earning higher grades. In fact, they experienced a 28% increase in GPA overall.

However, in contrast to their reported use of fewer strategies as measured by the Strategy Questionnaire, the students in this group attributed their success to their <u>efforts</u>, an internal, variable, controllable characteristic. Therefore, it seems that these students were aware of their progress, conscious of "trying harder" and attributing their success to that, but, according to the questionnaire, were not specifically using the strategies learned in the workshop. That is, they did not "buy in" to the strategies taught.

The students who reported increased strategy use had mixed attributions. The three in the strategy increase group who were experiencing success as well as failure attributed their success to the internal, fixed, uncontrollable characteristic of ability. Two of the three attributed failure to task difficulty, an external, fixed, uncontrollable characteristic and the third to a lack of effort. The only student in this latter group who was experiencing total success made an effort attribution. So it seems that Jenny is the only one who attributes her progress to the use of the newly learned strategies. The others who experienced at least some success attributed it to natural abilities in these courses and not to the use of the strategies. Only Shannon notes a lack of effort affecting her progress. Therefore, even though these students did "buy in" to strategy use, for the most part they did not attribute their success or failure to the strategies.

These data are somewhat perplexing. One would expect that if students chose to increase their use of strategies, they would attribute successes to their efforts in using them. And if students chose not to use the strategies, they would not attribute their successes to their efforts but rather to ability, task characteristics, or luck.

While no sweeping generalizations may be made from this limited number case study, some interpretions may be offered. There is anecdotal interview evidence to suggest that the students who were not actually improving their grades from the previous semester at midterm were demonstrating increased strategy use in a continuing effort to do so. They could not attribute their limited success to the strategies

(effort) because they were not being successful "enough" (i.e., they rationalized the reasons for their success). And those who were increasing their grades, made the expected internal, variable, controllable "effort" attribution (Weiner, 1979) even though in reality they had not chosen to continue the use of the strategies. Hence, students may adopt and continue strategy use if they have high expectations for success (self-efficacy), are achieving at least some level of success, and aspire to do better.

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Table 1

Sample Items from Strategy Questionnaire

STRATEGY	FREQUENCY OF USE				VALUE					AWARENESS	
	Never	Sometimes	Often	Always	Low				High		
	0	1	2	3	0	1	2	3	4		
1. Preview/Skim text materials (titles, headings, pictures) before reading.....	0	1	2	3	0	1	2	3	4	Yes	No
2. Read chapter overview and/or summary before reading chapter.....	0	1	2	3	0	1	2	3	4	Yes	No
3. Read chapter carefully more than once.....	0	1	2	3	0	1	2	3	4	Yes	No
4. Generate questions to be answered.....	0	1	2	3	0	1	2	3	4	Yes	No
5. Generate predictions about the content.....	0	1	2	3	0	1	2	3	4	Yes	No

Table 2

Sample Items from Progress Report

IF YOUR GRADES HAVE IMPROVED IN ANY COURSES THIS SEMESTER, TO WHAT DO YOU ATTRIBUTE YOUR SUCCESS? READ THE FOLLOWING STATEMENTS AND RANK ORDER THEM ACCORDING TO HOW WELL THEY REPRESENT THE "CAUSE" OF YOUR IMPROVEMENT BY WRITING IN A 1, 2, 3, OR 4 IN OTHER WORDS, NUMBER 1 WOULD BE THE STATEMENT THAT MOST CLEARLY REPRESENTS THE CAUSE AND NUMBER 4 WOULD BE THE STATEMENT THAT LEAST CLEARLY REPRESENTS THE CAUSE. (DON'T COMPLETE THIS IF YOU FEEL THAT YOU HAVE NOT IMPROVED AT ALL.)

_____ I have natural abilities in these courses.

_____ The grading curves have been lower in these courses.

_____ The tests and projects have been easier in these courses.

_____ I have been using more effective study strategies for these courses.

_____

_____

IF YOUR GRADES HAVE NOT IMPROVED IN ANY COURSES THIS SEMESTER, TO WHAT DO YOU ATTRIBUTE YOUR LACK OF SUCCESS? READ THE FOLLOWING STATEMENTS AND RANK ORDER THEM ACCORDING TO HOW WELL THEY REPRESENT THE "CAUSE" OF YOUR LACK OF IMPROVEMENT BY WRITING IN A 1, 2, 3, OR 4, IN OTHER WORDS, NUMBER 1 WOULD BE THE STATEMENT THAT MOST CLEARLY REPRESENTS THE CAUSE AND NUMBER 4 WOULD BE THE STATEMENT THAT LEAST CLEARLY REPRESENTS THE CAUSE. (DON'T COMPLETE THIS IF YOU FEEL THAT YOU HAVE IMPROVED IN ALL COURSES.)

_____ The grading curves have been higher in these courses.

_____ I don't have much natural ability in these courses.

_____ I haven't been using effective study strategies in these courses.

_____ The tests and projects have been very difficult in these courses.

_____

_____

REFLECT ON YOUR ABILITY AND EFFORTS IN RELATION TO YOUR SUCCESS OR FAILURE DURING THIS SEMESTER AND IN THE PAST. READ THESE STATEMENTS AND RATE THEM ACCORDING TO HOW WELL THEY EXPLAIN YOUR EVALUATION OF YOUR ABILITY AND EFFORTS OVERALL.

	LOW				HIGH
I have the ability to use study strategies effectively.	0	1	2	3	4
My efforts in using study strategies are rewarded (or would be rewarded if I used them)	0	1	2	3	4

Table 3

Student Information on Strategy Use, Grades, Attributions, and Self-efficacy

STUDENTS	GRADES FALL-SPRING	ATTRIBUTIONS SUCCESS	ATTRIBUTIONS FAILURE	SELF-EFFICACY ABILITY	SELF-EFFICACY EFFORT
INCREASE LEVEL OF STRATEGY USE					
Angie	2.30-2.24(-)	Ability	Task	Moderate	Moderate
Jenny	3.43-3.45(0)	Effort	-	High	High
Shannon	2.58-2.51(-)	Ability	Effort	High	High
Joy	2.90-2.80(-)	Ability	Task	High	High
MAINTAIN OR DECREASE LEVEL OF STRATEGY USE					
Jason	2.40-3.00(+)	Effort	-	High	High
Chad	1.55-2.44(+)	Effort	-	High	High
Kendra	2.90-3.71(+)	Effort	-	High	High
John	1.80-2.80(+)	Effort	-	High	High
DISCONTINUED COMMUNICATION					
Tom	2.60-2.50(-)	----------			
Bill	2.50-2.30(-)	----------			
Greg	2.90-2.30(-)	----------			

END

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